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AUTHOR	Gordon, John; Nelson, Glenn
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ABSTRACT

Economic growth and development have many implications that need to be considered so that informed decisions regarding the community can be made. Although expansion of an existing establishment or a newly located plant or business are the primary means by which communities seek economic growth, growth can also occur when the new industry is located in a nearby community and residents commute to work. Government programs are another source of economic change. Some impacts of change may be positive, others negative. Sometimes the growth in the private sector does not justify all the expense the public sector must incur because of a large influx of new residents. Private sector impact is the effect on employment, income, or sales. Public sector impact includes the increased revenues from property taxes as well as the increased expenditures on schools, health and welfare programs, police and fire protection, utilities, recreation, streets and sanitation. Estimating community net gains in dollar terms can be accomplished by calculating the net gains and losses for each sector and comparing the two sets of figures to determine if a particular course of economic development is in the best interests of the community. This report concludes with examples from three hypothetical rural or small communities illustrating how the benefits and costs of potential projects are calculated. (DS)

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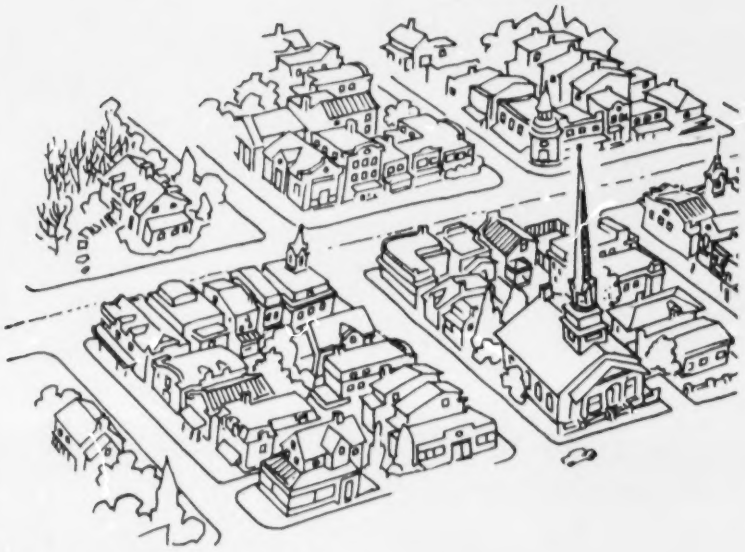

some economic considerations

John Gordon and Glenn Nelson
Department of Agricultural Economics

October 1975

Cooperative Extension Service, Purdue University, West Lafayette, Indiana

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summary

Economic growth and development have many implications that need to be considered so that informed decisions regarding the community can be made. The private sector may expect changes in the economic dimensions of employment, personal income, sales, and investments. Total impacts will exceed the effects directly attributed to the new development.

Because the public or government sector of the community will also be affected, both revenue and expense consequences need to be carefully identified. Impacts on the public sector may be quite diverse depending upon the relationship of community boundaries to those of the various taxing districts.

Three hypothetical illustrations are discussed here. In most cases the community's private sector will experience some net gain from development. The size of this gain depends on the net increase in payroll going to the residents of the community and percentage of this income spent there.

The public sector's net economic position is affected by the additional property taxes paid per new worker and the increase in capital expenditures for additional services required. This latter consideration is an important reason why the impacts of a similar development may be very different for two communities. One community may need to build a new school or finance a substantial municipal service investment, while another community is able to provide needed services with existing capital facilities.

Since each community is unique, the economic impacts of each potential development must be separately considered. If your community needs assistance in getting economic impact information, the Indiana Cooperative Extension Service and Purdue University may be able to help. Contact your County Extension Agent or the authors for further information.

as your community grows... some economic considerations

John Gordon and Glenn Nelson • Department of Agricultural Economics

Economic growth and development, by their very nature, create changes in a community. Often the changes or impacts are related to the expansion of an existing establishment or to a newly located industrial plant or business. Growth of this type is commonly referred to as industrial development although the terminology is not meant to exclude non-manufacturing business. This is the primary means by which communities seek economic growth.

But industrial development is not the only means by which a community can achieve economic growth. A closely related, yet different, type of growth occurs when the industrial plant or business is located in another community and residents commute to work. Thus a community can experience population and income growth although its industrial base does not change. Effects from this type of growth are different from those expected when population growth is accompanied by industrialization.

Government programs are another important source of economic change in communities. They range from federal efforts to alleviate poverty, build highways, or construct lakes for recreational purposes to local government efforts to finance sewage or school construction projects. All of these programs affect income flow and therefore have impact on the local economy.

Some impacts may be judged as positive and others as negative for a community. Both benefits and costs must be identified if an overall assessment of the worth of the economic development proposal to the community can be made. Since the importance placed on the various impacts by residents varies, the desirability of a given development proposal will vary from community to community. In addition it should be recognized that economic development can also have effects on the social, political or environmental structure of the community.

Prior to evaluating potential impacts, the boundaries of the community must be specifically identified. This is necessary because impacts vary according to the size of the economic unit studied. More economic effects will be included in a county than in a city and more in the state than in a county. The importance of this will be emphasized later as multiplier effect. After you have identified the community boundaries, economic impacts can be broadly categorized as effects on (1) the private (business and household) sector, or on (2) the public (government) sector of the community.

private sector impact

Impact on the community's private sector can generally be identified as effect on (1) employment, (2) income, or (3) sales. Because these concepts are interrelated, much of the following discussion, while included only under one category, is applicable to the other categories as well.

Employment. Employment is an important economic indicator because it is closely related to population numbers and characteristics as well as to income. The most obvious employment effect is the number of workers employed by the new industry. But from the standpoint of the community, many other considerations are also important.

employment

If workers in the new plant were previously employed in the community and if their old jobs were refilled, then the total number of workers in the community has in fact increased. But if the old jobs were not refilled, or if the residents filling the new jobs were previously commuting to work in another city, the implications for the community will be different since the total labor force has not increased.

Another consideration relates to whether the skills required for the new jobs can be found in the local population. If one of the community's objectives is to increase employment among present residents, then care must be taken to see that the particular skill requirements can be met from the existing labor force. Similarly, if the community wants to increase employment within a certain segment of its population, such as women or youth, then care must be taken to match the particular labor supply with the needs of industry.

Within a community some diversification of business is often desirable to add stability to the labor market. Too much concentration in one industry can render the community's economy vulnerable to external forces that cause expansion and contraction within the particular sector. De-

troit is an example of a community with a large concentration of automobile-related industry. When the automobile industry is expanding the local economy moves ahead vigorously, but during periods with low automobile sales, Detroit has a very serious unemployment problem that spreads to other segments of the city's economy.

Still another consideration has to do with the multiplier effect, which refers to economic changes stimulated by the initial changes in employment or income. When the workers employed in a new business spend their income in the community for items such as food and clothing, the entire retail sector is strengthened and new jobs may be created by this increased consumer demand. Similarly, the new business may purchase some of its raw materials or supplies from existing businesses located in the community. Additional workers may be needed in the existing businesses to handle the increased sales to the new business.

Although multiplier effects can be important, they are often overvalued. Note that the multiplier effect is reduced when purchases are made outside the local community and when there is enough capacity existing in the local economy so that new job opportunities are not created by the increased demand. This means that multipliers decrease as community size decreases.

Income. One of the primary goals of economic development is to increase personal income. Just because a new business will employ a certain number of workers, per capita income does not necessarily increase. A business that pays very low wages and attracts workers to a community may actually lower per capita income in the community.

Increasing personal income in the community is desirable, but the distribution of income is also an important consideration. Different income classes or groups in the community will benefit in various degrees from the new business.

income

Whether the new workers are residents of the community or live outside and commute to work is important. Resident location determines to some extent where family income is spent, where property taxes on houses are paid, and the local government services demanded. Wages paid to in-commuters obviously leave the community more rapidly than wages paid to residents. This is referred to as income leakage from the community.

Sales. At the national level one important indicator of economic growth is gross national product, GNP, which is the final value of all goods and services produced. No sim-

sales

ilar measure is available for communities. However, the value of sales is somewhat comparable. It differs in that there is some double counting, whereas in the GNP concept the value of intermediate products is carefully excluded. Nevertheless, the effect of a new industry on sales in a community is often a useful impact measure.

The distribution of sales by sector gives some indication of diversity in the economy and also allows an initial determination of whether a new business will be able to purchase inputs within the community. These are desirable because they tend to increase multiplier effects.

Value of sales is sometimes reduced to include only retail sales. When compared to surrounding areas, per capita retail sales indicate the strength of the community as a trade center and also are useful for estimating certain tax receipts.

investment

Investment. Employment, income, and sales generated by the new economic activity are expected to continue indefinitely once begun. However, there may be one-time events in the economy. The most important of these is investment in capital structures such as industrial buildings, roads, houses, and public facilities. Investment in structures may occur either as a direct effect of an industry moving to a new site, or indirectly as the new workers need additional housing, or when community services such as school classroom space becomes inadequate because of increased population. These impacts are extremely difficult to estimate because investment decisions depend on many variables including the capacity and potential of existing facilities. It must also be remembered in measuring these effects that they are generally nonrecurring events and the economic effects from the construction phase, such as increased employment in construction jobs, will not be permanent.

public sector impact

New economic activity in a community affects local government revenues and expenditures. When the development is industrialization, changes are initially caused by the new plant and new residents. Then the residents may have more income and want more services that require additional taxes. These public sector impacts are generally not as well understood as private sector impacts because local government fiscal operations are unfamiliar to many people.

Several local government organizations may be affected by the economic development. These may be county, city,

town, school or other government organizations. One of the first tasks is to identify the relevant units of government for the specific development proposal. This is important because the distribution of benefits and costs among the local units of government is frequently of more, or at least equal, interest as the comparison of total public sector benefits and costs. It should also be remembered that changes can sometimes be made to improve the distribution of benefits and costs.

Revenue. Because property taxes are the major source of local government revenue, investment decisions are critical. Additional property taxes will be forthcoming from new business investment and housing. Only the assessed value of the additional investment due to industrialization is a gain to the property tax base. This includes new buildings, equipment, and inventory resulting from new business. Industries vary substantially in the amount of capital invested per worker. This, of course, is reflected in the assessed valuation and subsequently in property taxes paid.

revenue

Other revenue sources of local government may include transfers from state and federal government, licenses, fees, fines, grants and hook-up charges paid by new residents and the new business. Further revenue for local government consists of taxes generated because of additional income in the community, which can affect property values, merchants' inventories, and shared state and federal taxes. If families with school age children move into the community or if there is new assessed valuation or personal income, state and federal aids to the school district may be affected.

Expenditures. The costs of public services for new residents and businesses are obvious expenditures for the local units of government. In estimating these costs, it is the additional cost resulting from the development that needs to be identified. For each local unit of government it is necessary to identify who pays the additional cost.

To begin estimating the additional cost it is helpful to consider a list of local government services. All services may not be affected by the development and, after initial consideration, those services not affected can be excluded from further study. A major portion of property taxes is used to support the educational services of local schools. Other services include health and welfare programs, police and fire protection, municipal utilities, parks and recreation, streets and roads, and sanitation. Additional expen-

expenditures

ditures may arise if local residents and merchants demand more public services as their income increases.

Estimating the additional services required is complicated by considerations related to quality of services and by needs for additional investment in capital items. For example, if new residents build 25 new homes in a community and the community adds a new fire truck which also improves the fire protection services of the old residents, it is probably not appropriate to charge the entire cost of the truck to the new residents.

net gains to the community

Estimating community net gains in dollar terms can be accomplished with a pencil and paper or by using a computer program depending on the detail needed and resources available for the study. (A specific discussion of how to estimate impacts is contained in "Evaluating Economic Impact of New Industry on Wisconsin Communities" by R. E. Shaffer, Cooperative Extension Service, University of Wisconsin.)

The net gain or loss to each sector (public and private) is the difference between the sector's total benefits and costs. The net gain or loss to the community is the sum of the net gains or losses for each sector. It should be noted that distributional effects (who pays and who receives the benefits) are not captured in this total figure. In the case of industrial development, a community may choose to use the net gain or a portion of it as an inducement to attract new industry, although this is often not necessary. Knowledge of economic impacts can be extremely important information for the community although noneconomic impacts should also be considered in the analysis.

illustrations

To further demonstrate the types of impacts that a community may experience as a result of economic development, three illustrations of community situations are discussed below. These illustrations are entirely hypothetical. Specific numbers are included but the figures are for demonstration purposes only. To avoid getting the examples overly complicated all impacts are not explicitly considered, such as secondary effects in the public sector.

Even in actual situations where a study has been conducted it should be remembered that statements concerning possible impacts are always about what is likely to happen

in the community based upon the present level of understanding. Naturally many changes may occur that will alter actual impact experienced in the community. Some of these changes are under the influence of the local community; others are not.

Illustration Number 1 - Residential Growth

Rural Town, U. S. A., is a community of less than 5,000 located near an interstate highway. For the 20-year period 1950 to 1970 Rural Town experienced very little population growth. But a recent study suggests that if present trends continue, the community's population will increase by about 500 persons over the next 5 years. Most of the new workers are expected to commute to Bigcity which is a large industrial city located within a 25-minute drive of Rural Town.

This type of growth has many implications for Rural Town. Of the 500 people about 200 will be employed. Average income per capita of the new residents is expected to be about the same as existing residents. But about half of these workers will be employed in skilled blue-collar jobs with an average annual income of $12,000 to $13,000. The remaining workers will likely be employed in relatively less skilled manufacturing jobs paying $5,000 to $8,000 per year. In total about 170 workers will commute to Bigcity and about 30 new workers will be needed in the local community.

1—residential growth

The earnings of the new workers will increase personal income by nearly two million dollars a year in Rural Town. Although many of the retail purchases by Rural Town residents are made in the shopping centers around Bigcity, about 40 percent of the worker's income will be spent locally. Due to the high proportion of commuters, automobile sales and service establishments in Rural Town will benefit relatively more than other retail stores from this increased spending. A total of 20 new retail positions will be created, but the net addition of retail jobs is likely to be around 10 as some of the new jobs will be filled by persons whose present jobs will not be refilled.

Very few of the 167 families will be able to find existing housing in Rural Town. Perhaps one-third of these families will build new homes costing around $30,000 each. This new single-family construction will add about 20 new jobs to the labor force of the community over the next 5 years.

The remaining families will likely live in mobile homes or in apartments if they are constructed.

A study of the additional municipal services required to serve the new residents indicates that sewer and water facilities will need to be extended to accommodate many of the new houses. The annual cost to the community of expanding these facilities will be about $27,000. Police and fire protection facilities will cause annual expenditure increases totaling $19,000 but an additional garbage truck will be required. The new truck will also be used to serve some of the old residents. The cost attributable to economic development will be about $13,000 annually. The school system will be able to accommodate the new students with an additional $10,000 per year from local revenue sources.

The new residential property will add about $35,000 to the property tax revenues. Other revenue sources are expected to increase by about $10,000 per year.

The annual net effect on the private and public sectors of Rural Town might be summarized as follows:

Wage and Salary Income (assumes 40% spent locally)	$760,000	
Multiplier Effects ($760,000 x .2 local multiplier)	132,000	
Private Sector		$892,000
Sewer and Water Systems	$ 27,000	
Garbage Collection	13,000	
School Expenses	10,000	
Police and Fire Protection	19,000	
Public Sector Costs	$ 69,000	
Property Taxes	$ 35,000	
Other Revenues	5,000	
Public Sector Revenues	$ 40,000	
Public Sector		-$39,000

Recall that in these illustrations all possible impacts are not included, but based on the situation presented above it appears that the private sector would show a substantial gain from this type of growth. However, the total costs in the public sector are about $39,000 larger than anticipated receipts.

Illustration Number 2 - Capital Intensive Growth

An economic impact study of the proposed electrical generating plant to be located near Yourtown, U. S. A., indicates that when in full operation 150 blue-collar workers will likely be employed. Only about 50 of these jobs will be filled by semi-skilled workers receiving above average wages. It is expected that these 50 jobs will be a net addition to the community's labor force.

In addition about 100 highly skilled workers will be needed in the management and operation of the plant. These are relatively high paying jobs but will likely have to be filled with professionals from outside Yourtown. Only 25 of these workers are expected to move into the community as permanent residents with the remaining 75 commuting to work from Bigcity, which is a 30-minute drive from Yourtown.

The total annual payroll from the plant will be around 2.5 million dollars but only about 1.0 million will be paid to workers living in Yourtown. Normal operation of the plant is not likely to require inputs available in Yourtown, but the retail merchants can expect additional sales because of the new payroll. About 50 percent of the local payroll will be spent in Yourtown. This will create a need for 10 new workers in Yourtown's retail stores. These jobs are likely to be filled with local residents at an annual average salary of $7,000. The total increase in population due to the plant will be about 255 people including workers and their dependents.

The impact study stresses that these effects will exist only after the plant is in operation. During the 5-year construction period very few local impacts are anticipated because the skilled construction workers are expected to commute on a daily basis from Bigcity.

2—capital intensive growth

After the plant construction phase, it seems likely that about 40 new houses will be needed in Yourtown. No new permanent jobs are expected from this needed housing construction because existing contractors and their crews can probably handle the required work.

Property tax receipts from the plant are expected to average about $400,000 per year during the first 10 years of operation. Because of depreciation, property tax receipts after the first 10 years are expected to be about $170,000 per year. The 40 new houses will generate about $16,000 of property tax revenue per year.

The county will be required to help build a new road to the plant. The cost is estimated to be one million dollars. In addition an investment of $400,000 will be needed for a water line to the plant.

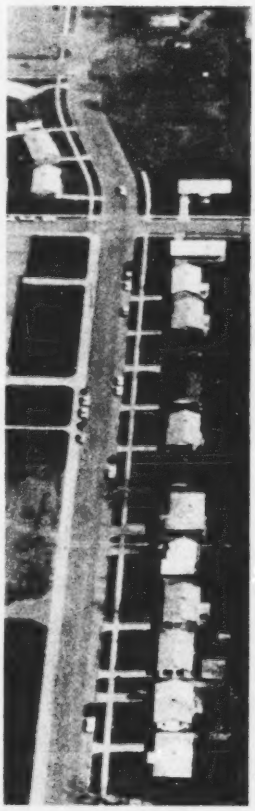
Because of the projected decline in school enrollment from existing residents, it seems that Yourtown's school system will be able to accommodate the 70 new school children without adding classroom space. Additional operating expenses will total about $10,000 per year.

It is estimated that only 30 of the 40 new houses will be built within the city limits. The city will need to spend about $600,000 for new sewage and water lines for these new houses. An additional $175,000 will be needed by the fire department for new equipment and an additional $30,000 per year will be needed by the city police department.

The annual net benefits to the community after the plant is in operation might be represented as follows:

Wage and Salary Income (assumes 50% spent locally)	$535,000	
Multiplier Effects ($535,000 sales x .3 local multiplier)	160,500	
Private Sector		$695,500
Annual Cost of Capital Expenditures for Sewer and Water Lines and Fire Department Equipment	$145,000	
Police Services	30,000	
School Expenses	10,000	
Public Sector Costs	$185,000	
Property Taxes First 10 Years from Plant	$400,000	
Property Taxes after First Ten Years from Plant	170,000	
Property Taxes from Residential Property	16,000	
Public Sector (First Ten Years of Operation)		$231,000
Public Sector (After First Ten Years of Operation)		$ 1,000

During the initial 10-year period of operation both the private and public sectors show economic gains in this hypothetical situation. After the plant depreciates somewhat, only the private sector will show economic gains and the public sector will about break even.



3—low capital growth

Illustration Number 3 - Low Capital Growth

Recently a large manufacturing corporation announced that it intends to open a new plant employing 800 workers in Incity, U. S. A., a community of nearly 50,000 people. The company may construct some new facilities, but for the most part it will be operating from the old XYZ building. Some of Incity's residents requested a study of the likely economic impacts after construction is completed and the plant is in full operation. The study has just been completed.

Based on an analysis of the labor market, it is likely that 500 of the 800 new jobs will be filled with residents of Incity. It is suggested that perhaps as many as 100 of these jobs might be filled by women. About 300 positions will be filled by persons commuting to Incity for employment. The majority of these positions will pay from $7,000 to $9,000 per year. Plant managers will likely be transferred into the community from the corporation's headquarters.

Of the 500 jobs likely to be filled by residents, it is likely that 475 will be net additions to the community. The remaining 25 positions will go to persons whose previous positions will not likely be refilled.

It appears that the required skill levels will be easily found in the area's labor force. However, it should be noted that the plant belongs to an industry which fluctuates in employment more than the average of manufacturing industries.

Total population in the community will likely increase by 1425 persons because of the direct and indirect effects of the new plant. Retail sales in the community might increase by around three million dollars. Because of the increased consumer spending, 15 new positions may be expected in the retail sales sector. In addition the new plant will buy inputs for its operation from two existing manufacturing firms in town. Employment in these existing businesses will likely need to expand by 85 persons in order to accommodate the needs of the new plant.

The majority of the population increase can be accommodated in existing housing although the construction sector

will be strengthened somewhat by increases in building activity. The existing contractors and crews should be able to meet the needs for new housing construction. Additional property tax revenue from new houses, apartments and mobile homes is expected to total $150,000.

Needs for sewage and water treatment facilities will be increased by about $35,000 annually. Other municipal services will require an additional $55,000 annually. However, public school enrollment might increase by 315 students above present levels. This would require additional school facilities and expenditures, costing an additional $200,000 per year.

The new company requires services, mostly for water, sewer and street costs, of $20,000 per year. The company would pay about $10,000 to the city for utilities and an additional $40,000 in property taxes. Other revenue to the city from the increased population may be about $5,000.

The net effects on an annual basis to Incity are summarized below:

Wage and Salary Income (assumes 50% spent locally)	$2,300,000	
Multiplier Effect ($2,300,000 x .2 local multiplier)	460,000	
Private Sector		$2,760,000
Sewer and Water Systems	35,000	
Other Municipal Services	55,000	
School Expenses	200,000	
Services to Plant	20,000	
Public Sector Costs	$ 310,000	
Property Taxes (Residential Sources)	150,000	
Property Taxes (Plant)	40,000	
Utility Fees from Plant	10,000	
Other Revenue	5,000	
Public Sector Revenue	$ 205,000	
Public Sector		-$105,000

As stated previously all impacts are not included in the illustrations, but in this case the public sector can expect a loss because relatively little new capital is being invested in the community. However, the private sector shows substantial gains in the incomes of workers and retail merchants.